

# A Public-Private Partnership to Rebuild, Expand I-70 in Missouri



## **Summary**

Interstate 70 needs help.

Its original pavement is shot, held together by years and years of overlays. Its bridges are nearing the end of their useful lives. It carries far more traffic than for what it was designed. Congestion is mounting. The increasing mix of long-haul trucks with cars makes people nervous and concerned for their safety.

And fixing it at a cost of \$2 billion-\$4 billion is beyond the state's means – today and maybe forever.

But the Missouri Department of Transportation has a unique opportunity to move forward with a project that would reconstruct and expand Missouri's "Main Street" – the 200 miles from east of I-470 in Independence to I-64 near Wentzville. While taking care of the safety, condition and capacity needs of I-70, the project would put thousands of people to work, stimulate the state's economy, and not put the costly needs of I-70 in competition with other transportation needs across the state.

It can be done with a public-private partnership (P3), a contractual arrangement between MoDOT and a private sector entity in which the skills and assets of both parties would be used to deliver this critical improvement. Private sector investment would be repaid by I-70 users through a toll. A tolled facility would have a dedicated revenue stream to pay for its operation, maintenance and future condition and safety needs.

It's not a new concept. Several years ago the Missouri General Assembly passed legislation to enable construction of the new Mississippi River Bridge in St. Louis with a P3 and a toll, and also approved using public-private partnerships to deliver improvements to other transportation modes in Missouri.

Why now?

- **The need is there, is not going away, and cost will only continue to escalate.**
- **MoDOT has all necessary environmental approvals.**
- **MoDOT has federal approval to rebuild I-70 as a toll road.**
- **Frees up money spent today on I-70 that could be used on other critical projects.**
- **Would bolster Missouri's economy and create thousands of jobs.**

Without taking this bold step, the I-70 of today will continue to be the I-70 of tomorrow. MoDOT will do its best to maintain the driving surface but will be unable to add capacity to alleviate congestion, facilitate mobility between its two largest cities and allow for the efficient movement of goods and materials.

## I-70's Capacity and Condition

I-70 was designed and constructed from 1956-65. Its oldest sections are 55 years old (*in fact, the first piece of the nation's interstate highway system was built on I-70 in St. Charles County in 1956*) and its youngest are 46.

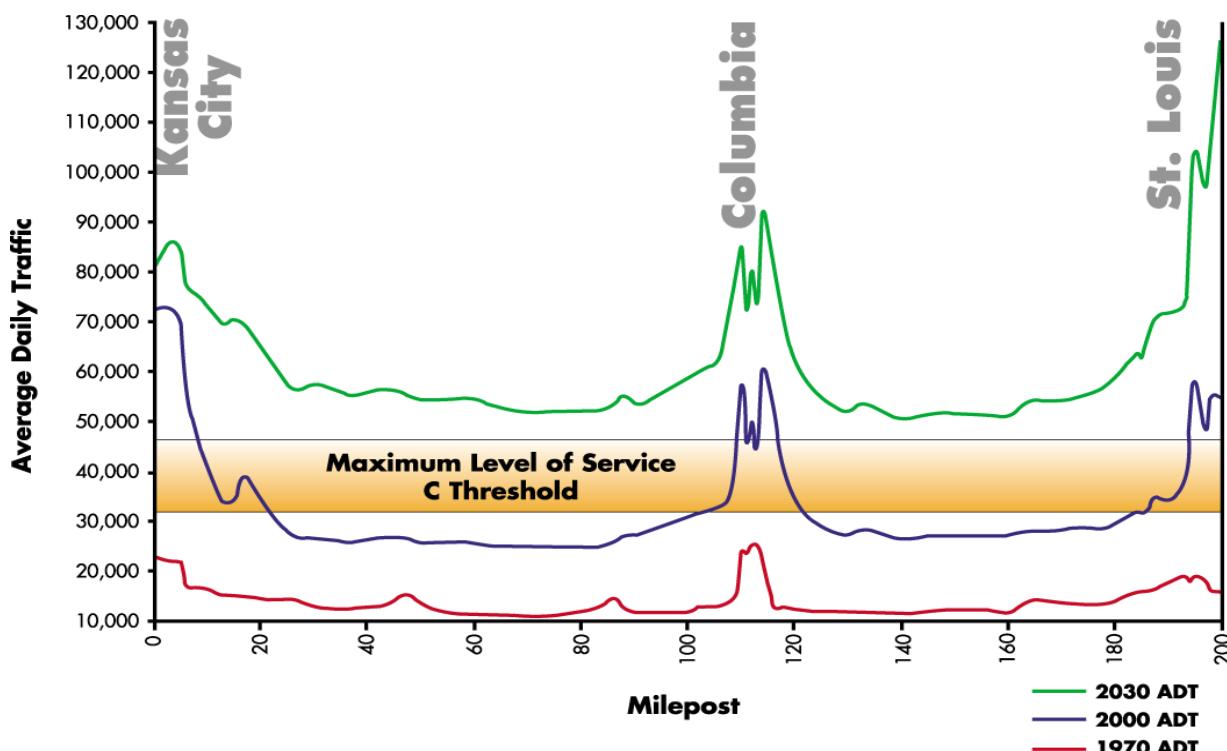
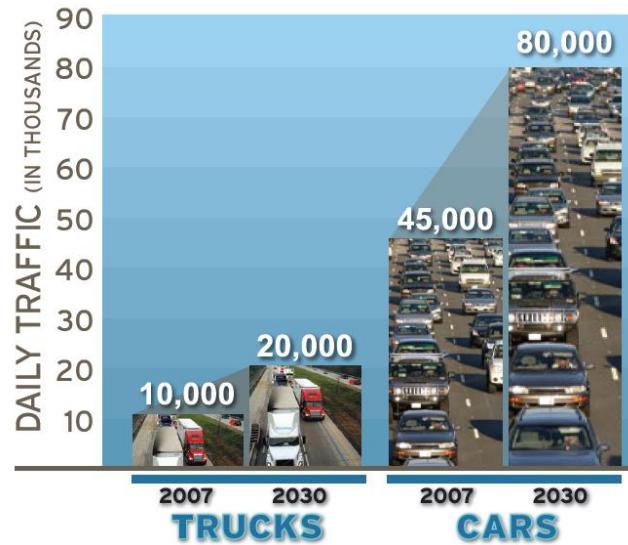
It was intended to carry 12,000-18,000 vehicles per day. Today, it carries an average of 31,000 vehicles per day in the corridor's most rural sections, with 10,000-13,000 trucks. At the Kansas City end near I-470, Interstate 70 is carrying more than 98,000 vehicles per day with 25,000 trucks. Where I-64 connects with I-70 near Wentzville, daily traffic is nearly 45,000 vehicles per day with 15,000 trucks.

Almost 70 percent of those trucks travel the entire length of the 200-mile corridor.

And because Interstate 70 is such a critical east-west link, spanning 10 states from Maryland to Utah, I-70 in Missouri is the choice of a hefty number of out-of-state drivers. Take a look at the map. Interstate highways funnel into Missouri in both Kansas City and St. Louis, then are carried across the state by I-70.

Closing a lane for any reason on I-70 between Kansas City and St. Louis results in immediate backups that stretch for miles. And it will get worse. Traffic projections show that by 2030, the entire corridor from Kansas City to St. Louis will operate in a stop-and-go condition.

I-70 Traffic Projections



MoDOT has made keeping I-70's driving surface in good condition a priority. Resurfacing treatments, though, don't last long because of the damage that exists beneath the surface. The original pavement – some of which dates back to sections of old U.S. Route 40 that were built in the 1920s – has been pounded to bits by years of mounting traffic.

I-70 was designed to the standards of a different day. For example, the median is 40 feet wide instead of the 60 feet it would be if built today. All of the mainline and crossroad bridges are approaching the need to be replaced. Nine were re-decked as part of the Safe & Sound program within the last three years.

### **The Cost**

The fix for I-70 comes at a high price; just adding a lane in each direction would cost \$2 billion. Rebuilding with dedicated truck lanes could cost as much as \$4 billion. MoDOT doesn't have those kinds of resources. To fund an I-70 rebuild through conventional methods could mean a double-digit increase in the state's gas tax. Or, it could mean incremental yearly improvements that even at \$100 million per year would take 20-40 years to complete. Or, it could mean a new revenue source like a statewide dedicated sales tax. None of those seem to be palatable solutions to the problems of I-70.

Tolling may not be popular, either, but tolling I-70 is a viable way to pay for this project and a public-private partnership is a viable way to get it quickly underway. The tolling option seems to be the least painful, most equitable and least impactful option to raise additional revenues that can be invested in I-70 while not affecting the rest of Missouri's transportation system.

Tolling today does not mean stopping to throw quarters in a basket. MoDOT would use a technologically advanced electronic system that doesn't require even slowing down. It doesn't need a booth on every ramp.

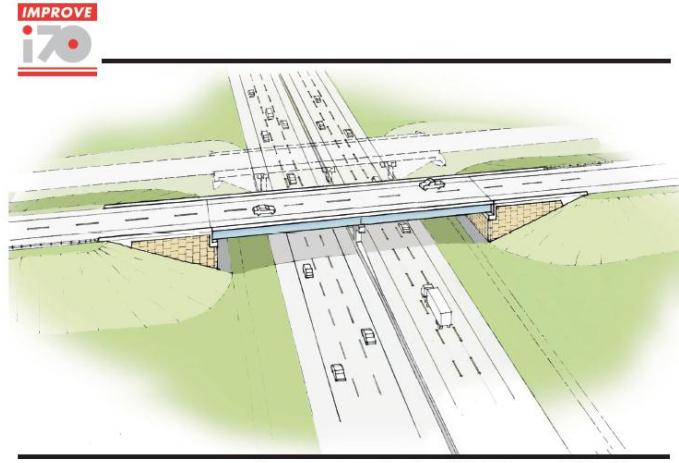
The price of a toll, locations of toll stations, and other details would be answered by detailed investment-grade analysis that would come as part of private-sector proposals. Those proposals would tell MoDOT how Missourians can get the most bang for their buck, and what level of private investment could deliver what kind of improvement with what return.

### **Environmental Studies and Tolling Authority**

To develop alternatives for I-70 improvements, MoDOT has completed a tiered Environmental Impact Statement (with Records of Decision received in 2001/2006) and a Supplemental EIS (2009). I-70 was given "conditional provisional" status as a pilot toll project on an existing interstate by FHWA in 2005 – a status that is coveted by other states. Virginia is the only other state with a similar ability and is now developing a toll project for I-95.

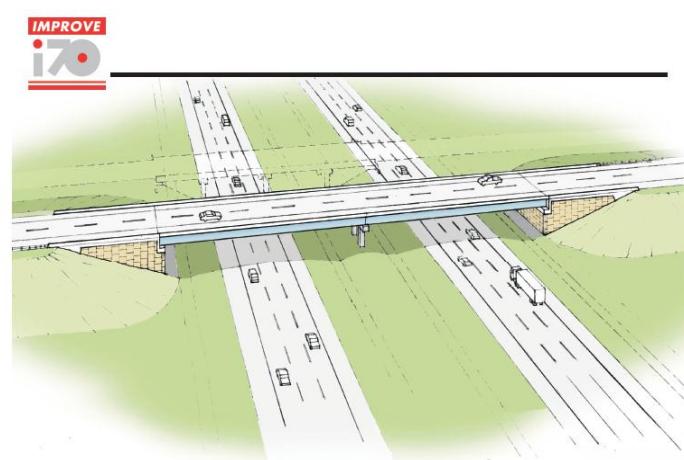
MoDOT's environmental studies developed cost estimates associated with the selected alternatives, ranging from approximately \$3 billion (three lanes in each direction with about 150 feet of additional right of way needed on one side or the other) to \$4 billion (eight-lane facility including four lanes dedicated to long-haul trucks within the same footprint). In 2010, an internal MoDOT team estimated a project that would add one lane in each direction by filling in the median with minimal other improvements and right-of-way needs would cost \$2 billion.

- **Low End – \$2 billion** – would replace all of the pavement and add lanes in the existing median. This strategy would mean separating the eastbound and westbound traffic with a concrete barrier wall that would run for 200 miles. Only the interchanges that carry the most traffic would be reconstructed. This strategy has minimal needs for additional right-of-way because every effort would be made to fit the improvements within the exiting footprint. In a six-lane configuration, trucks would be limited to usage of the right-hand two lanes.



**Reconstructed with Closed Median**

- **Selected Alternative from 2006 EIS Record of Decision -- \$3 billion** – MoDOT's tiered EIS, completed in 2006, would replace all of the pavement, rebuild every interchange, and would add a minimum of one lane in each direction. To more easily facilitate construction while maintaining four lanes of traffic, one set of lanes would be built outside the existing lanes. Traffic would then be shifted to the new lanes while half of the existing lanes were replaced with new lanes. The remaining old lanes would then be removed. The result is a very wide median – 80 to 125 feet – that would be reserved for future transportation options. This strategy would require 150 feet of additional right-of-way, on one side of I-70 or the other. The wide median would not extend through urban areas, conserving space by utilizing a concrete barrier to separate traffic. In a six-lane configuration, trucks would be limited to usage of the right-hand two lanes.



**Reconstructed with Wide Median**

- **High End – Selected Alternative from 2009 SEIS Record of Decision – \$4 billion** – In 2006, 800 miles of I-70 across Missouri, Illinois, Indiana and Ohio was designated a national “Corridor of the Future” that was critical to freight movements across the Midwest. As part of that designation, MoDOT studied an eight-lane reconstructed I-70 with four lanes dedicated to long-haul trucks and four lanes for general purpose vehicles. It fits within the same footprint as the six-lane option with the wide median, and in effect, this



strategy utilizes the dedicated truck lanes as the “future transportation option” that was discussed previously. It would enhance safety by dramatically reducing the interaction between trucks and cars. It would facilitate more efficient movement of freight through reduced congestion and could allow for more robust pavement designs in the truck lanes that would accommodate heavier trucks. It would also build truck-car separated interchanges at U.S. Routes 65, 63 and 54. Truck-only lanes also provide for redundancy of the system, allowing traffic to be shifted from one set of lanes to the other to allow traffic to maneuver around incidents, or to facilitate maintenance activities. Truck-only lanes also strengthen connections to other transportation modes and intermodal facilities.

### **I-70 Economic Benefits**

The Department of Economic Development estimates the long-term economic impact from the I-70 project would create 6,070 jobs per year at an average wage of \$34,118. Over the life of the facility (assumed in the model to be 37 years past construction), the project generates cumulative economic output totaling \$29.5 billion, which provides a return of \$5.24 for every dollar invested.

These numbers are based on a conservative \$2 billion project. A larger project investment would create higher economic benefits.

An increase in employment would occur during the construction years in the form of direct labor on the project, suppliers to the project such as asphalt and concrete, labor industries related to construction such as medical, and labor increases due to increased discretionary income for employed workers.



The increase to new personal income would increase annually by more than \$377 million and Missouri's unemployment rate could be impacted in a positive direction for many years to come.

### **Project Schedule**

Detailed schedules for design and construction of a new I-70 have not yet been developed, but it is anticipated that in concert with a private sector partner the entire process could be completed in six-eight years. The original facility, built largely across virgin ground, was completed in nine years.

| <b>Project</b>       | <b>2012</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>I-70 Corridor</b> |             |             |             |             |             |             |             |             |             |
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**Toll Project Authorization**

**Investment Grade Study**

**EIS Re-evaluation**

**Private Sector Partner Procurement**

**Financing**

**SELECTION**

**Preliminary (ROW) Plans**

**ROW Acquisition**

**Final Design**

**Construction**

## **Why is a P3 MoDOT's Best Option?**

Efforts over recent years to find dedicated funding to enable the reconstruction of I-70 have failed to gain traction. Discussions of a 1-cent sales tax for 10 years to rebuild both I-70 and I-44 took place in legislative committees in recent years but went no further.

There is no political or public will to increase fuel taxes, increases that would need to be substantial just to rebuild I-70.

The bottom line, then, is that without a toll paid by those who use I-70, the project to rebuild and expand the facility may never happen.

This dilemma is not unique to Missouri. As state governments struggle to meet growing transportation infrastructure needs while revenues dwindle, leveraging resources through the use of public-private partnerships has become increasingly attractive. As of September 2011, 31 states and Puerto Rico had enacted laws authorizing P3s for highway and bridge projects with more than \$46 billion being invested in more than 80 transportation projects over the last 20 years. Currently 36 states have toll facilities operated by more than 100 public and private toll agencies.

P3s are agreements that allow private companies to take on traditional public roles in infrastructure projects, while keeping the public sector ultimately accountable for a project and the overall service to the public. In a P3, a government agency typically contracts with a private company to renovate, build, operate, maintain, manage or finance a facility. Contracts addressing project delivery and financing arrangements for P3 projects vary greatly and are unique for each given project.

In applying a public-private partnership to Interstate 70, the Missouri Highways and Transportation Commission would retain ownership of the infrastructure asset.

P3s have been shown to reduce upfront public costs through accelerated or more efficient project delivery. P3s do not create new money but instead leverage private-sector financial and other resources to develop infrastructure. A revenue stream generated by tolls is most commonly used to pay back the private investment.

Roles assumed by the private sector in a P3 can include designing, building, operating, maintaining or financing a facility. Risk allocation is critical in order for a P3 project to be successful. P3s are characterized by a transfer of risk associated with a transfer of responsibilities, and essentially differ based on which risks and responsibilities are contractually transferred to the private sector. When the private sector assumes a risk in a P3, it becomes responsible for solving certain potential

| <b>Pay-As-You-Go 10-Year Funding Options</b>  |                |
|---|----------------|
| <b>Diesel Tax Rate (70% state)</b>  | <b>Average</b> |
| \$2 billion project   | 29 cents       |
| \$3 billion project   | 44 cents       |
| \$4 billion project   | 59 cents       |
| <i>1 cent = \$7 million per year</i>  |                |
|   |                |
| <b>All Fuel Tax Rate (70% state)</b>  |                |
| \$2 billion project   | 7 cents        |
| \$3 billion project   | 11 cents       |
| \$4 billion project   | 14 cents       |
| <i>1 cent = \$28 million per year</i>   |                |
|   |                |
| <b>General Sales Tax</b>  |                |
| \$2 billion project   | 0.3 cent       |
| \$3 billion project   | 0.5 cent       |
| \$4 billion project   | 0.6 cent       |
| <i>1 cent = \$657 million per year</i>  |                |
|   |                |
| NOTE: Current state fuel tax is 17 cents per gallon.<br>Figures listed above would be in addition to that.<br>MoDOT receives 70 percent and cities/counties receive 30 percent. |                |

problems that might arise in project delivery and for absorbing related financial losses (or, conversely, for benefitting from related financial gains).

Risks usually assumed by the private sector include those associated with the phases of the project with which it will be involved, such as those related to uncertainties in construction cost, schedule, operations and maintenance and, in some cases, traffic and revenue. The public sector tends to retain risks related to uncertainties in environmental permitting and clearance, right-of-way acquisition and changes in applicable law.

In general, the cost to finance a project from private resources (taxable bonds, private loans and common equity investments) as compared to public resources (tax-exempt bonds) is more expensive. In order to offset some of the financing cost differences other financing tools need to be used such as Transportation Infrastructure Finance and Innovation Act (TIFIA) federal loans and private activity bonds (PABs). These financing tools provide access to low-interest loans or tax-exempt debt to private sector entities for transportation projects and reduce financing costs to levels more competitive with public debt. Many current P3 projects are utilizing the U.S. Department of Transportation's TIFIA loan program, but this loan program is limited to 33 percent of the total project costs and a maximum loan term of 35 years.

P3s may not be the most cost-effective or appropriate procurement model for projects if the public sector can deliver better value without it. To protect the interest of public entities, a value for money analysis must be performed to compare present value costs for various project delivery/financing alternatives, including a traditional public-sector approach. The value for money analysis identifies quantitative measurements to test if higher financing costs and risk premiums can be offset by potential benefits. Areas to be examined related to I-70 would include:

- Private financing and project acceleration – P3s can facilitate the delivery of projects that otherwise might have been delayed or not built at all because of state fiscal constraints;
- Cost and time savings – can result in significant project cost and time savings compared to traditional procurement;
- Lifecycle efficiencies – can give the private contractor an incentive to reduce cost across a facility's entire lifecycle through innovative design that reduces construction costs, high-quality project delivery that lowers the cost of maintenance and improvements, or up-front maintenance that avoids costly rebuilds in the future;
- Improved project quality – can give a private contractor more flexibility to incorporate state-of-the-art technologies and techniques which may result in best practices to be applied to other projects as well;
- Risk transfer – allocating risk to the party best able to manage it makes it less likely that each project risk will materialize, thus reducing the overall project risk; and
- Public control and accountability – by specifying the desired performance standards in the contract and holding the private entity financially accountable for meeting them the public sector can potentially enhance its control over the project's outcome.

The P3 contract is paramount and should contain critical provisions that protect the public interest such as performance standards, toll policies or other payment mechanisms, public sector flexibility to provide transportation services, labor protections, public oversight and monitoring, revenue sharing, risk allocation, default provisions and termination or “buy back” options.

## Likely Allocation of Risk

| Risk Type           | Public Risk Retaining | Risk Sharing | Private Risk Taking |
|---------------------|-----------------------|--------------|---------------------|
| Legislative         | X                     |              |                     |
| Land Acquisition    | X                     |              |                     |
| Design/Construction |                       |              | X                   |
| Operating           |                       |              | X                   |
| Revenue (traffic)   | ?                     | ?            | ?                   |
| Financial Market    |                       | X            |                     |
| Dispute Resolution  |                       | X            |                     |

## Toll Roads in Other States

Although many toll roads exist in the U.S., most were constructed during the 1940s through the 1970s and are not good comparisons to I-70 in Missouri. Below are listed some of the newer toll systems that do not serve only as bypasses or loops around major metropolitan areas. These toll roads are all at least 50 miles long.

| STATE/ROAD  | TERMINI   | LENGTH (miles)    | TOLL FOR CARS*                | AGE   |
|---|---|-------------------|-------------------------------|---|
| <b>Virginia, I-95</b>                                 | D.C. to N. Car. border  | 179               | Not established               | Future toll road                            |
| <b>Texas, SH 130</b>                                  | Northern metro Austin south to I-10                             | 88, when complete | About 12 to 15 cents per mile | Partial opening, 2006. To be completed 2012 |
| <b>Pennsylvania, Mon-Fayette Expressway (PA 43)</b>   | Pittsburgh suburbs Jefferson Hills south to near Morgantown, WV | 52, when complete | 8.3 to 10 cents per mile      | Begun in 1977, to be completed 2012.        |
| <b>Delaware, Korean War Veterans Hwy. (DE Rte. 1)</b> | I-95, near Wilmington, south to Dover                           | 51                | About 4 to 8 cents per mile   | Built 1993 - 1999                           |

(\* - Tolls for trucks vary dramatically, but are generally two-four times higher than the passenger car rate. In some cases they are 10 times that of the auto rate, depending on number of axles, weight, time of day, etc.)

- 1) **Virginia's I-95 Toll Road** - This facility holds the same designation from FHWA as I-70 in Missouri to enable an existing interstate highway to be converted to a tolled facility. Its development is underway. Intent is to toll the entire length of I-95 (from North Carolina to the District of Columbia). No other decisions have been finalized including how to toll, how frequently to toll or the amount.
- 2) **Texas State Highway 130** - Most of Texas' toll roads exclusively serve large urban areas like Dallas-Ft. Worth and Houston. One new toll road, however, extends beyond a metropolitan area. State Highway (SH) 130 currently extends almost 50 miles and essentially serves as a bypass of metro Austin. SH 130 will be about 88 miles long when it is completed late this year. It will connect I-35 at Georgetown, a city of about 50,000 located about 28 miles north of Austin, with I-10 at a location about 45 miles northeast of San Antonio and 45 miles south of Austin. SH 130 is being constructed to relieve congestion on I-35 and other major highways within the Austin-San Antonio corridor. SH 130's tolls are about \$0.12 to \$0.15 per mile for a two-axle vehicle and will be expected to remain within that range when the southern extension is complete.

The first segment of SH 130 opened to the public in 2006, and by 2008 was extended southward to US 183. On June 28, 2006, Cintra-Zachry, (Cintra is a Spanish developer and Zachry Construction is headquartered in San Antonio) reached a \$1.3 billion agreement with the state to build a 30+ mile segment from US 183 to I-10 near Seguin. In exchange for their investment, Cintra-Zachry received the right to collect tolls for 50 years in a revenue sharing agreement with Texas. The state will own the road while the developer will be responsible for financing, design, construction, operation and maintenance over the life of the agreement. Construction has begun on the final segments, with completion expected in 2012.

- 3) **Pennsylvania's Mon-Fayette Expressway** - Begun in 1977 and to be completed this year, this 52-mile road connects the southeastern suburbs of Pittsburgh to the West Virginia border to the south, just north of

Morgantown WV. The tollway was built to spur economic development. Cars pay about 8.3 cents per mile (EZ Pass) or just over 10 cents per mile (cash). The West Virginia portion of this toll road is under construction. Because a toll plaza was not incorporated in the design of the short West Virginian section, officials from both West Virginia and Pennsylvania are contemplating the possibility of sharing the tolls collected in Pennsylvania.

**4) Delaware's Route 1** - Delaware Route 1 is 103 miles long, but the northern 51 miles is a toll road connecting Wilmington to Dover. All of its length is within metropolitan boundaries, but some of this distance is not densely populated. It was completed in 1999. DelDOT charges a toll of \$2 on weekdays (\$4 on weekends); or almost 4 cents per mile for autos on weekdays and almost 8 cents per mile on weekends.

**5) Other Toll Roads** - For very general comparison, some other lengthy U.S. toll roads, although built decades ago, are listed below. Each of these were toll roads that were absorbed into the interstate highway system.

- Florida Turnpike - 265 miles, almost 7 cents per mile for autos. It connects Ocala and Orlando with northern metro Miami. It is considered the third busiest toll road in the U.S. Constructed from 1957 to 1974.
- Kansas Turnpike - 236 miles, about 7.2 cents per mile. It connects Kansas City, Kansas to Wichita and continues to the Oklahoma state line. It was built in the mid 1950s.
- Ohio Turnpike - 241 miles across northern Ohio, over 4 cents per miles for autos with EZ Pass and over 6 cents per mile for those without. Along the way it connects Cleveland-Akron with Toledo. The road was built in the mid-1950s.
- Pennsylvania Turnpike - Traversing the entire state, the 360-mile tollway connects metro Philadelphia to metro Pittsburgh and continues toward Cleveland, Ohio. Cards pay about 8.6 cents to almost 10 cents per mile. The roadway was originally built in the early 1940s.
- Will Rogers Turnpike - 88 miles long and fairly typical of Oklahoma's extensive turnpike system, it charges cars about 4.5 cents per mile. It connects Tulsa to the Missouri border near Joplin. The turnpike opened to traffic in 1957.

### **Constitutional and Legislative Authority to Toll Interstate 70**

The Missouri Highways and Transportation Commission lacks authority on its own to impose and collect a toll on a new I-70. And so do its contractors. The Commission needs an act of the General Assembly to impose and collect tolls on New I-70.

The Missouri Constitution does not specifically prohibit tolls on state highways.

The Commission also needs authority from the General Assembly to execute a public-private partnership agreement on New I-70 to avoid existing, but conflicting, Commission procurement authority under state law.

In pursuing a public-private partnership, MoDOT will work closely with the Missouri General Assembly to craft the legislative language that is best for the State of Missouri.

### **Opposition**

Polling, as well as history, demonstrates that Missourians don't like tolling. They do, however, want to see improvements made to I-70 that may not be affordable any other way. A national poll completed last year by the Reason Foundation found that 58 percent of Americans would rather see new highway capacity paid for by tolls than by increased gas taxes (28 percent) and a comparable 55 percent supported the use of public-private partnerships to build critical infrastructure.

Discussions of utilizing a toll to reconstruct and expand I-70 have resulted in only two known organized groups in opposition – the trucking industry and the gas station/convenience store operators along the corridor. During the EIS and SEIS processes over the past decade, MoDOT has reached out to both groups numerous times. They agree that improvements to I-70 are

overdue but disagree over how to pay for them. The truckers maintain a public stance in opposition to tolls. They prefer an increase in fuel taxes, although their counter proposals would not increase MoDOT funding to a level that would enable construction of the I-70 project.

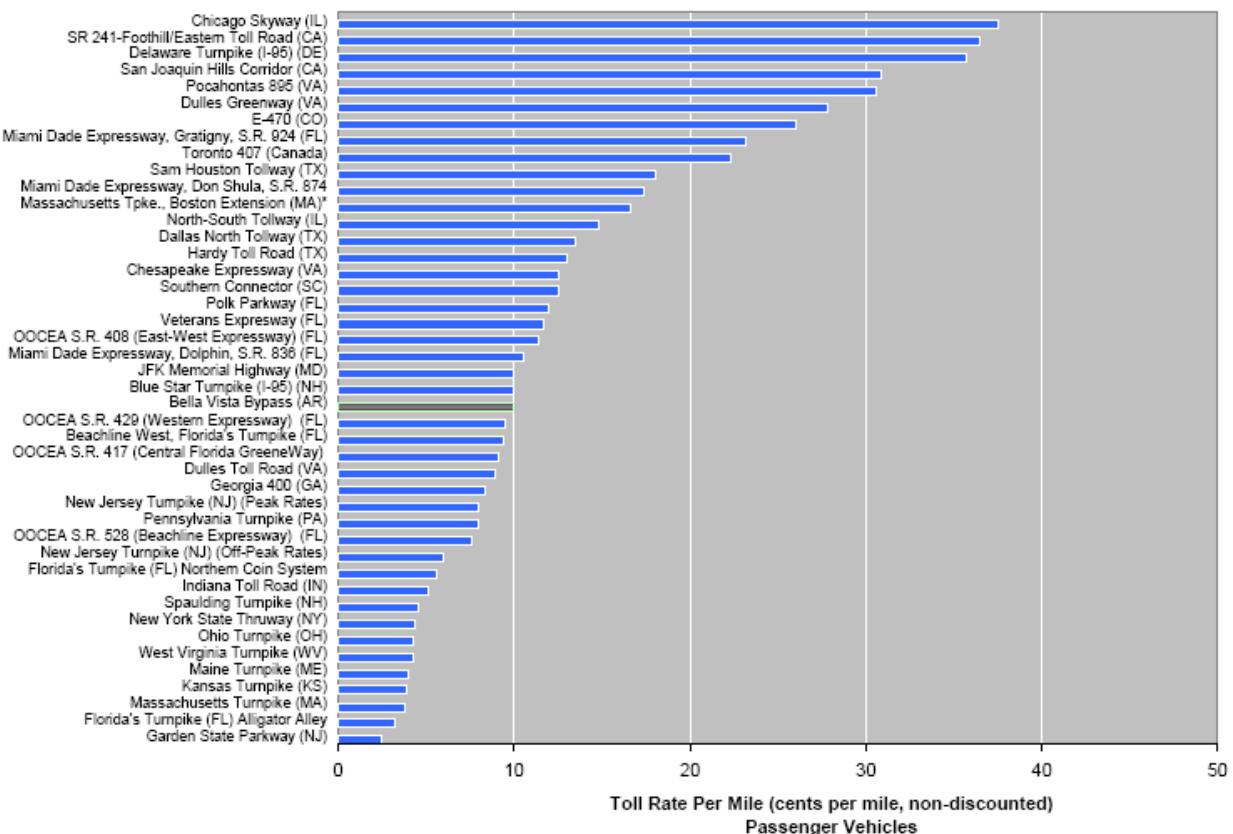
### **Toll Rates**

The schedule of toll rates that would apply to various classes of vehicles would be determined by an investment grade study. But MoDOT anticipates those rates would be in the range of 10-15 cents per mile for automobiles and two to three times that for trucks. These rates are in keeping with those charged on other toll facilities as detailed earlier and in the charts that follow.

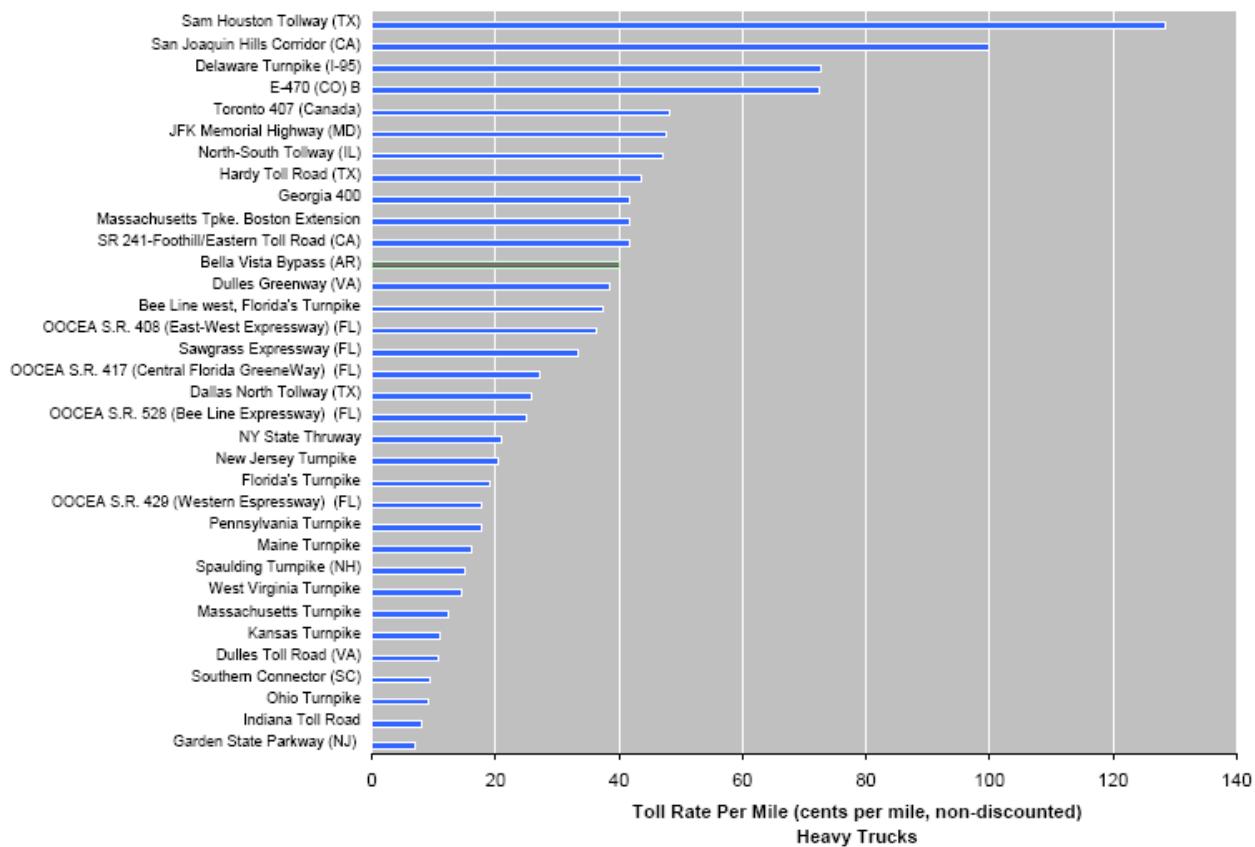
It is unreasonable to think that a toll would be charged only until such time as the initial investment to build the project was repaid. The term of a contract with a private sector partner would likely be in the range of 30-50 years which would coincide with the life-cycle of the facility, meaning that significant improvements to I-70 could be required about the time of the contract's expiration. A toll in perpetuity would facilitate the long-term needs of I-70 so that MoDOT does not face this dilemma again in the future. The mechanism to adjust toll rates in the future, if needed, would be carefully spelled out in the contract and would require involvement of the MHTC.

[The charts on the next page are from a toll study that was conducted in 2009 on the Bella Vista Bypass for the Arkansas Department of Transportation.]

## Toll Rate Per-Mile Cost Comparison – AUTOMOBILES



## Toll Rate Per-Mile Cost Comparison – HEAVY TRUCKS



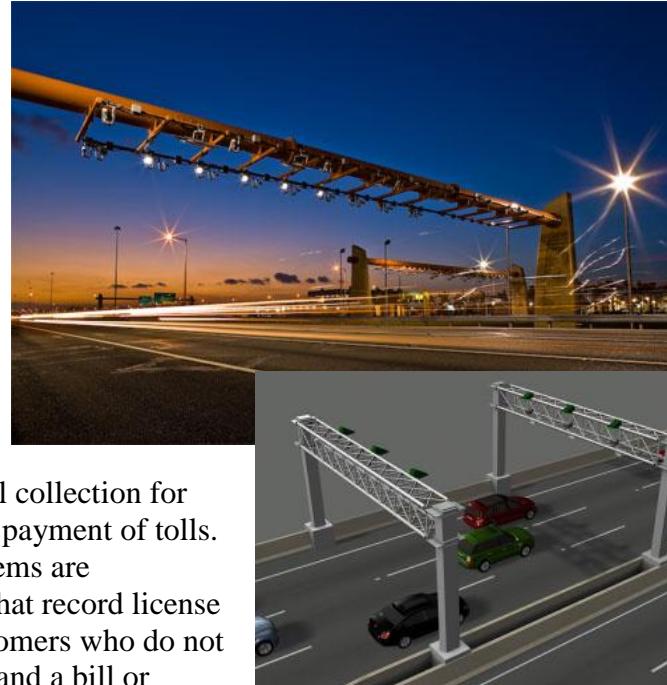
## **Operational Characteristics and Options:**

Toll facilities generally take one of two forms – open or closed systems. The traditional – and now largely antiquated – is the closed system where it is impossible to enter or exit the system without paying the toll. The Kansas Turnpike, where every entry/exit ramp is controlled, is an example. Closed systems typically have few access points.

That would not be practical for the 200 miles of I-70 between Kansas City and St. Louis which has more than 50 interchanges today. While some that are of close proximity could be combined, MoDOT has no intention to reduce access to I-70 or its adjacent communities.

Today's technology has enabled the creation of open-road tolling – the collection of tolls on toll facilities without the use of toll booths for toll collection. Slowing to throw a handful of quarters in a basket is a thing of the past.

The major advantage to open-road tolling is that users are able to drive through the toll collection zone at highway speeds without having to stop or even slow down to pay the toll. Tolls are typically collected using electronic toll collection for identification of customers and electronic payment of tolls. Many times electronic toll collection systems are supplemented by image capture systems that record license plate images that are used to identify customers who do not have an electronic toll collection account and a bill or violation notice can be sent.



Transponders, small electronic tags, are placed on the windshield of drivers' cars when drivers open an account with the toll operator. Tolls are collected as the transponder is read at normal highway speeds by electronic scanners suspended from gantries above the highway. Motorists can link their transponders to credit card accounts to automatically charge pre-determined amounts when their account is low. Accounts can also be quickly refilled through a phone call, trip to a kiosk or office or by visiting a website. Transponders may also emit a signal to drivers when their account is getting low.

This method of toll collection is fast becoming globally accepted as electronic toll collection technologies grow and demonstrate improved accuracy and affordability. Electronic collection systems are 33-50 percent less expensive than traditional “manned” tolling operations.

- **Higher performance and safety:** An electronic toll collection system provides uniform, highway-speed travel for the public, without the stop-and-go and the accident potential of traditional toll collection systems.
- **Efficiency:** An all-electronic system provides more efficient toll collection operations by eliminating queues at toll booths, lowering toll collection costs and enhancing customer service.

- **Sustainability:** Open-road tolling saves fuel and reduces vehicle emissions by eliminating waiting times at traditional toll booths. In addition, open-road tolling allows for expanded capacity at toll locations without the need to build additional infrastructure, reducing right-of-way needs and associated impacts.

The exact number and placement of toll collection zones on I-70 would be determined by an investment grade study and by proposals from the private sector. But MoDOT anticipates that there would be four to six collection zones on I-70.

The flexibility offered by electronic open-road tolling systems is another advantage. Variable toll rates can be programmed, for instance, to offer reduced rates for long-haul trucks if they travel at night when traffic levels are lower, or to offer discounts for commuters who make relatively short trips on I-70. And, conceivably, drivers who enter and exit I-70 in-between toll collection zones may pay no toll at all.

The approach to maintenance on a tolled I-70 operated by a private-sector partner also offers options. The provider could opt to maintain the facility themselves, or they could contract with MoDOT to provide maintenance services like plowing snow, mowing, litter removal, etc.

### **Next Steps**

The most important step to take is passage of the enabling legislation.

Once achieved, MoDOT will identify a dedicated I-70 team to establish project goals, develop a Request for Proposal and shepherd the procurement process, re-evaluate the Environmental Impact Statement and evaluate needs for right-of-way and utility relocation.

At a minimum, MoDOT's project goals that would guide the private-partner procurement and the design, construction and operation of the facility would include:

- Reconstruct the entire 200-mile corridor, with a minimum life cycle of 45 years,
- Maintain local access to the corridor, and to adjacent properties,
- Establish the lowest possible user fee that, dedicated to I-70, can provide for its construction and long-term maintenance and operation,
- Complete construction of the facility in the shortest possible time frame,
- Provide a construction approach that manages traffic in the least impactful manner to MoDOT's customers,
- Be sensitive to the environment, recycling as much of the existing pavement and bridges as possible, while delivering the environmental commitments made in the environmental impact statement(s), and
- Develop and execute a comprehensive public communication plan that keeps MoDOT customers informed throughout the design, construction and operation of a new I-70.

MoDOT will keep the General Assembly informed along the way with regular reports to and appearances before the Joint Committee on Transportation Oversight.

### **Bottom Line**

In MoDOT's current financial condition, with an annual construction budget that has fallen to about \$600 million, and with no indication that additional revenue is on the way for transportation at either the federal or state levels, it's inconceivable to think that enough money could be carved out to tackle a project of the magnitude of I-70.

MoDOT conducted a two-phase tolling feasibility study in 2002 and 2005 that identified a handful of projects that would be viable in a tolled environment. I-70 was one of those. From a high-level view, it indicated that a toll would support a project in the range of what has been suggested in this report.

In reality, tolling I-70 may be the only way this project is ever accomplished. Without it, life on I-70 will be business as usual. MoDOT will resurface and maintain it to the best of its ability. Incidents and maintenance operations will continue to cause lengthy backups. And drivers will continue to experience rising traffic levels, increased numbers of trucks and congested conditions.